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ABSTRACT

Intelligence tests, particularly the Stanford-Binet, have been much abused and unintelligently misused. If the results of such testing are used for the purpose for which they were designed and are interpreted carefully and accurately, then the results can be used to indicate what kind of teaching methods should be utilized; what kind of cognitive strengths exhibited by the pupil can be capitalized upon; and what kind of cognitive weaknesses can be strengthened. It has been the use of IQ tests that has made educators and psychologists aware of the cultural environmental deficits exhibited by certain groups of children. The school is the primary agent that helps children to maximize their potentials, thus enabling them to cope with their environment. Intelligence test scores, when intelligently applied, are the best data available for getting a predictive statement about school achievement. The scores can provide a great deal of meaningful and helpful information about a child, but it must be remembered that a given score means something different for each child who obtains it. (CK)

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INTELLIGENCE TESTING IN THE SCHOOLS

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The point of view I'm going to take about intelligence testing in the schools is, succinctly, that if the results of such testing are used for the purpose for which they were designed; if the results are interpreted carefully and accurately, then the results can be used to indicate what kinds of teaching methods should be utilized; what kind of cognitive strengths exhibited by the pupil can be capitalized upon; what kind of cognitive weaknesses can be strengthened. Interestingly enough, it is the use of IQ tests that has brought home to us the tremendous cultural environmental deficit exhibited by certain groups of children.

My point of view should be put in a frame of reference. I'm a psychologist who attempts to apply the knowledges and skills of my profession toward the solution of the problems of the schools - I'm in hearty agreement with Jerome Bruner's (1965) statement that the business of psychology is in the schools. My ultimate professional goal is identical to the goal of education - it sounds and is idealistic, without apology. The goal is to help all children and youth maximize their potential in order to become useful, responsible adults who can cope successfully with their environment. As a school psychologist, I view the school as the primary agent in reaching

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this goal. I do not negate the importance of parental customs and social environment, but I'm a pragmatist - I can reach children in the schools.

Working in the schools is working in a fascinating, difficult world - the terrible and agonizing upheavals of society are reflected all too clearly in the schools; the schools have always received a double-bind kind of directive from society. The schools were created to preserve a certain kind of society, yet the schools are asked to be a major change agent in society. The schools have been charged with the provision of the climate and setting for a certain kind of learning - the learning of those skills which enables kids to grow up to contribute to and cope successfully with the society in which they live. The academic skills, in our society, are valued. The billboards that urge kids to complete their schooling because better jobs are available to them if they do are based on firm research. The schools are supposed to see to it that kids do indeed learn the academic skills. Our first schools concentrated on teaching the academic skills - often by pure rote memory reinforced (if negatively) by the rod, and there is some current evidence (Bereiter, 1966) that standing up and shouting "facts" in unison have some value.

The mental health movement which started in the early part of the 20th century was reflected in the schools; there became awareness that such factors as motivation and emotional and social adjustment

affect school learning. Teachers have known from time immemorial that some kids learn to read with ease while others don't. Teachers have labelled some kids bright and others dumb. Teachers have long been baffled by kids who seem bright but don't learn the academic skills. Teachers have turned to psychologists for explanation. In the late 1800's the French Ministry of Education asked Alfred Binet to come up with some way of sorting out kids who can learn from those who can't. He was being asked, of course, for a predictive statement about children in regard to their potential for school learning. As we also well remember, Binet used teachers to get the items for his test, which in turn was used to advise teachers!

The adaptation of the Binet test in this country by a number of workers led to the best known version, Terman's Stanford-Binet, and this 1916 version was the one used in the well-known logitudinal studies which have borne out that those children who achieved high scores on the S-B in general fare better than those who achieved low scores - not only in school achievement; they were better able to cope with their society in that their society judged them successful. They attained higher educational levels, got and maintained more personally satisfactory (and better paying) jobs, and were also physically healthier, judged more physically attractive, and evidenced fewer problems of emotional and social maladjustment (Terman, 1925).

A plethora of IQ tests followed the S-B, both group and individual. There tests show high positive correlations with each other, even those which attempted to get at different factors of cognitive function (verbal and non-verbal), and those purported to be "culture fair". Despite Thurstone's efforts, Spearman's "g" is pervasive. All of these IQ tests show a high positive correlation with school achievement - r of 6 or better. Only 36% of the variance, admittedly, but there are more kids whose achievement does not live up to prediction based on higher IQ's than there are kids who have low IQ scores and achieve well. The so-called (misnamed?) "over-achiever" is a rarer bird than the "under-achiever".

Now, if we buy that school achievement is one of the best coping mechanisms for dealing with society, as research suggests very definitively, then it is, to say the least, helpful for school personnel to have some notion of what their task is going to be. I contend that the results of intelligent intelligence testing, intelligently used, are the best data we have to date for getting a predictive statement about school achievement.

Of course we're measuring environmental influence. We have a number of studies - exemplified by the Skodak study of the thirties (Skodak, 1939). We know we're also measuring a version of the Hawthorne effect and self-fulfilling prophesy as in the Rosenthal and Jacobson study (1968). What would be incorrect - and even Jensen (1969) doesn't really claim this - would be that what we

are measuring with IQ tests in the schools is independent of environment, is immutable, and is indication that a child is incapable of learning. What we are measuring is precisely what the test makers have been telling us for many years, and I'm appalled that some psychologists working in the schools have either forgotten or never learned. Binet, as translated in 1916, does say that we are measuring first, intelligence pure and simple (we assume he is here referring to recognition of individual but not racial or cultural differences) but second; extra-scholastic acquisition capable of being gained precociously; third, scholastic acquisitions made at a fixed date; fourth, acquisitions relative to language and vocabulary, which at once scholastic and extra-scholastic, depending partly on the school and partly on the family circumstances (Binet and Simon, 1916). Obviously it is blatant misuse of Binet's test and Binet's explanation that eight-year-old Diana of Soledad, California was placed in a class for retarded children but found to score 49 IQ points higher than her original Binet testing when re-tested in Spanish (Learny, 1970). None-the-less, it should not be ignored that the lower Binet score (English version) undoubtedly predicted very accurately what Diana's school performance <u>at that point in time</u> was likely to be if she were in a typical classroom of all English speaking children with an English speaking teacher.

Wechsler's (1958) difinition of intelligence is "the aggregate or global capacity of the individual to act purposefully, to think

rationally and to deal effectively with his environment" (p. 7). It's precisely that "deal effectively with his environment" that seems to be the sore point about testing. Despite current criticism, schools have, by and large, successfully provided the tools to deal effectively with environment and that potential for mastery of those particular skills is quite accurately predicted by intelligence tests.

The present uproar about testing in the schools has to do with the predictions about school children who score low enough on the tests so that the prediction is made that they will have more difficulty in mastering academic skills than do the majority of children. This prediction is not invalid - it is indeed (if unfortunately) very accurate. The "mastering of academic skills" refers to the context - the kind of learning tasks and teaching methods - that <u>are</u> successful with a great number of children.

We are all very acutely aware that an obtained IQ score of 95 means something different for each child who obtains the score. It can mean for one child a pessimistic and discouraging portent of mediocrity; for another pervasive bitterness and pain, for a third a source of hope and joy for the future. For example, in an elementary school in a famous college town in New Jersey, the median IQ is 135. What does an obtained IQ of 95 mean there? Among the population of one Job Corps Center the median IQ was about 80 quite another meaning for the IQ of 95. A study done on

our campus (Berlin, 1966) indicated clearly that low SES boys with IQ's in the 90's learned tasks with fewer cues than did middle class boys with similar IQ's.

I am, along with many of us, eager to find a measurement of true potential for learning that is free from cultural bias. There are cognitive skills our IQ tests do not tap. At this point, however, it is somewhat futile to find a test that predicts accurately for antelope tracking when antelope tracking has no particular value in our culture. But researchers should not be deterred from trying to design procedures that may help develop "fluid ability" or "conceptual learning ability" or "abstract reasoning", nor should we ignore the fact that "capacity" can be expanded as Cronbach (1969) has pointed out. But our current tests, if used intelligently, give us some clues about capacity. We are measuring a particular kind of expectancy in a particular kind of cultural setting. But this expectancy is not fixed - we should use this measure of expectancy to help us manipulate the environment, and I mean particularly the school environment. This measure of current expectancy should not be used to tell teachers not to expect anything from Johnny, but certainly teachers have a right to be warned that they can't expect easy victories, and that as teachers they should be striving to make the kind of educational change Schwebel (1968) talks about so eloquently: "It is difficult to estimate the shift in the IQ distribution that would follow if we transformed all our school into institutions in tune with the

enormous capacity of children to be curious, excited, and involved in learning." (p. 212).

The responses to Jensen's (1969) environmental pitch indicate general agreement that there are genetic differences in capacity, as exemplified by the statements of J. McV. Hunt, David Elkind (interpreting Piaget), and Lee Cronbach. McNemar also made recognition of differences in his delightful presidential address of 1964, so aptly titled "Lost: Our intelligence? Why?"

To say that there are genetic differences in IQ is not to say that those genetic differences are racial. There are genetic differences among caucasians, orientals, and blacks. Racial purity is rather rare (and difficulty to determine) among Americans. Staunch support of the hereditarian position should be tempered by the realization that although ceilings exist and vary, we really do not know the exact limits of the ceiling, and we do know that a ceiling established by the limits of environment is a false ceiling.

IQ test results can give us a lot of meaningful and helpful information about a child. An IQ score should never be used out of context of the child himself. A test, as Terman pointed out in his 1937 manual for the S-B, is a method of standardized interview which calls forth the subject's natural responses to a variety of situations. The test is a sampling of behaviors which predict, primarily, for school achievement in traditional school situations. The test is also a good instrument for detecting certain kinds of

problems that interfere with learning (emotional or neurological for example). Perhaps most importantly, tests show us where, in education, we need to find ways to help kids to deal effectively with their environment - and to help particularly those kids whose environment has already provided two strikes against them.

In closing, a quote:

> . . . some recent philosophers appear to have given their moral support to the deplorable verdict that the intelligence of an individual is a fixed quantity . . . We must protest and act against this brutal pessimism . . . A child's mind is like a field for which an expert farmer has advised a change in the method of cultivating, with the result that in place of desert land, we now have a harvest. It is in this particular sense, the one which is significant, that we say that the intelligence of children may be increased. One increases that which constitutes the intelligence of a school child, namely, the capacity to learn, to improve with instruction (Binet, 1909, pp. 54-55)

The wording is quaint but pertinent. It is typical of the originator of the much abused and unintelligently misued[5] intelligence test. The author is Alfred Binet, writing in the year 1909.

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